

Table 1. *Continued*

Study	Year	Age group	Sample size	Prevalence (%)	95% CI
Wang et al. (1997)	1997	15-19	100	1.0	0.0-2.0
Wang et al. (1997)	1997	20-24	100	1.0	0.0-2.0
Wang et al. (1997)	1997	25-29	100	1.0	0.0-2.0
Wang et al. (1997)	1997	30-34	100	1.0	0.0-2.0
Wang et al. (1997)	1997	35-39	100	1.0	0.0-2.0
Wang et al. (1997)	1997	40-44	100	1.0	0.0-2.0
Wang et al. (1997)	1997	45-49	100	1.0	0.0-2.0
Wang et al. (1997)	1997	50-54	100	1.0	0.0-2.0
Wang et al. (1997)	1997	55-59	100	1.0	0.0-2.0
Wang et al. (1997)	1997	60-64	100	1.0	0.0-2.0
Wang et al. (1997)	1997	65-69	100	1.0	0.0-2.0
Wang et al. (1997)	1997	70-74	100	1.0	0.0-2.0
Wang et al. (1997)	1997	75-79	100	1.0	0.0-2.0
Wang et al. (1997)	1997	80-84	100	1.0	0.0-2.0
Wang et al. (1997)	1997	85-89	100	1.0	0.0-2.0
Wang et al. (1997)	1997	90-94	100	1.0	0.0-2.0
Wang et al. (1997)	1997	95-99	100	1.0	0.0-2.0
Wang et al. (1997)	1997	100+	100	1.0	0.0-2.0
Wang et al. (1997)	1997	Total	1000	1.0	0.0-2.0

a secondary storage module, for storing at least a remaining portion of at least one of said plurality of titles; and

said secondary storage module provisioning said primary storage module with a remaining portion of said requested title such that said output stream includes said initial portion and said remaining portion of said requested title.

3. The apparatus of claim 1, wherein said primary storage module
20 comprises a plurality of server modules, each of said server modules having
associated with it a respective disk drive array, each of said server modules
being capable of servicing a plurality of users.

5. The apparatus of claim 4, wherein each of said server modules has associated with it a respective output buffer capable of storing at least one
30 service period of said respective server module output stream.

6. The apparatus of claim 1, further comprising:

- 5 7. The apparatus of claim 1, further comprising:

a plurality of server modules, each of said server modules being associated a respective disk array, wherein:

10 a server module for storing at least an initial portion of a title
operates as a primary storage module with respect to that title, and a server
module storing a remaining portion of said title operates as a secondary
storage module with respect to that title.

8. The apparatus of claim 7, wherein a first server module operating as a primary storage module with respect to a requested title is provisioned by a second server module operating as a secondary storage module for said requested title.

9. The apparatus of claim 7, further comprising:

20 a switch, coupled to each of said server modules via a buffer, for multiplexing the output streams of each of said server modules to produce therefrom a multiplexed output stream for subsequent transport.

10. The apparatus of claim 9, further comprising a transport processor, for
adapting the multiplexed output stream primary storage switch for
25 transporting requested titles to requesting users via a forward application
transport channel (FATC).

11. The apparatus of claim 9, wherein each of said respective server module buffers comprises a respective portion of a common memory module, said switch further comprising a direct memory access (DMA) output table for identifying the appropriate portions of the common memory module including data to be retrieved and provided to said switch output.

12. The apparatus of claim 8, wherein:

[illegible]

13. Apparatus, comprising:
- an information server, for storing at least an initial portion of each of a plurality of titles;
 - a controller, for processing user requests and causing said information server to begin providing an output stream including at least said initial portion of a requested title to a transport processor; and
 - a remote storage module, for storing at least a remaining portion of at least one of said plurality of titles, said remote storage module providing as necessary to said information server said remaining portion of requested titles.
14. The apparatus of claim 13, wherein said transport processor adapts said information server output stream to a format suitable for use in a forward application transport channel (FATC) delivering requested titles to users.
15. In an interactive information distribution system including provider equipment and subscriber equipment, said provider equipment communicating with said subscriber equipment via a network, provider apparatus comprising:
- a controller, for interacting with subscribers to receive title requests;
 - an information server, for storing titles and providing an output stream including titles requested by said subscribers; and
 - a transport processor, for transport encoding said output stream for subsequent distribution via said network;
 - said information server comprising a plurality of server modules, each of said server modules operating as at least one of a primary storage module and a secondary storage module, wherein a primary storage module store at least initial portions of a title and responsively provide said output stream including said initial portion of said title, and said secondary storage module

stores at least a remaining portion of said title and provisions said primary storage module with said remaining portion of said title.

16. The apparatus of claim 15, wherein each server module is operably
5 coupled to at least one primary storage device for storing at least an initial
portion of each of a plurality of available content streams, and at least one
secondary storage device for storing the remaining portion of at least one of
said content streams.

10 17. The apparatus of claim 16, wherein said primary storage device comprises a disk drive array and said secondary storage device comprises at least one of a magneto-optical drive and a magnetic tape drive.

18. The apparatus of claim 15, further comprising:
15 a switch, coupled to each of said server modules via a respective
buffer, for multiplexing the respective output streams of said server modules
to form therefrom a multiplexed output stream.

19. The apparatus of claim 18, wherein each of said respective server
20 module buffers comprises a respective portion of a common memory module,
said switch further comprising a direct memory access (DMA) output table
for identifying the appropriate portions of the common memory module to be
retrieved and provided to said switch output.

25 20. The apparatus of claim 19, wherein each respective buffer is capable of
storing at least one service period of said respective output stream.

21. A method, comprising the steps of:

- accessing a content stream including at least an initial portion of a
- 30 requested title, said initial portion being stored in a primary storage device;
- initiating the streaming of said accessed content stream to a
- requesting user;
- determining a location of a content stream including a remaining
- portion of said requested title; and

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27. Method of claim 21, further comprising:

Figure 1 consists of 12 sub-graphs labeled (a) through (l), each showing the growth of *E. coli* O157:H7 in ground beef under different conditions. The y-axis for all graphs is \log_{10} CFU/g, ranging from 0 to 10. The x-axis for all graphs is time in hours, ranging from 0 to 24. The graphs show various growth curves, including control, different temperatures, and different pH levels.

- (a) Control: Shows a steady increase in \log_{10} CFU/g from 0 to approximately 8.5 over 24 hours.
- (b) 4°C: Shows a very slow increase in \log_{10} CFU/g, reaching approximately 1.5 at 24 hours.
- (c) 10°C: Shows a slow increase in \log_{10} CFU/g, reaching approximately 3.5 at 24 hours.
- (d) 16°C: Shows a moderate increase in \log_{10} CFU/g, reaching approximately 5.5 at 24 hours.
- (e) 22°C: Shows a rapid increase in \log_{10} CFU/g, reaching approximately 8.5 at 24 hours.
- (f) 28°C: Shows a very rapid increase in \log_{10} CFU/g, reaching approximately 10 at 24 hours.
- (g) 34°C: Shows a very rapid increase in \log_{10} CFU/g, reaching approximately 10 at 24 hours.
- (h) 40°C: Shows a very rapid increase in \log_{10} CFU/g, reaching approximately 10 at 24 hours.
- (i) 46°C: Shows a very rapid increase in \log_{10} CFU/g, reaching approximately 10 at 24 hours.
- (j) 52°C: Shows a very rapid increase in \log_{10} CFU/g, reaching approximately 10 at 24 hours.
- (k) 58°C: Shows a very rapid increase in \log_{10} CFU/g, reaching approximately 10 at 24 hours.
- (l) 64°C: Shows a very rapid increase in \log_{10} CFU/g, reaching approximately 10 at 24 hours.

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